

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) ~~A Non~~ non-pressurized method for the continuous production of alkyl esters of higher fatty acids, ~~especially biodiesel~~, from fatty acid triglyceride starting mixtures containing free fatty acids, ~~with~~ including an integrated combination of acid esterification and basic transesterification, ~~including said method comprising:~~
 - a) ~~single or multiple~~ at least one esterification of the free fatty acids in separate esterification devices connected with each other, with a C₁- to C₄- mono alcohol in the presence of an acid catalyst and glycerine as a dragging agent, at 60°C to 65°C ~~while an~~ to produce an esterification mixture ~~is produced~~,
 - b) partial purification of the first esterification mixture via partial separation of the dragging agent, acid catalyst and unconverted C₁- to C₄- mono alcohol,
 - c) transesterification of the fatty acid triglycerides, carried out at least twice, in separate transesterification devices connected with each other, with a C₁- to C₄- mono alcohol in the presence of a base catalyst at 60°C to 65°C ~~while to produce~~ a transesterification mixture ~~is produced~~, and
 - d) purification of the transesterification mixture via separation of the basic catalyst, unconverted C₁- to C₄- monoalcohol and the glycerine produced during transesterification, by ~~means of a~~ treatment ~~using~~ with water in at least one separator with subsequent drying,

~~characterised by the fact that~~ wherein the C₁- to C₄- mono alcohol used for esterification, the conveying agent glycerin used for esterification and the water used for purification of the transesterification mixture are at least partially recovered from the esterification and transesterification mixtures and ~~that further~~ wherein after purification the acid and base catalysts from the esterification and transesterification mixtures are converted, resulting in the production of a salt suitable for use as a fertilizer.

2. (Currently Amended) ~~Method~~ The method according to claim 1, ~~whereby~~ wherein the fatty acid triglyceride initial mixtures containing free fatty acids are selected from the group consisting of used ~~or~~ and unused, unpurified ~~or~~ and purified vegetable, animal ~~or~~ and industrial oils ~~or~~ and fats ~~or~~ and mixtures thereof with a free fatty acid content of 0 % to 100 %.
3. (Currently Amended) ~~Method~~ The method according to claim 1 ~~or 2,~~ whereby wherein the unpurified oils ~~or~~ and fats are selected from the group ~~comprising~~ consisting of soapstock, brown grease, yellow grease, industrial tallow, industrial lard, oil used for deep-frying, animal fat waste products, edible tallow, unpurified crude vegetable oils, unpurified animal fats ~~or~~ and mixtures thereof.
4. (Currently Amended) ~~Method~~ The method according to claim 3, ~~whereby~~ wherein the unpurified crude vegetable oils are selected from the group ~~comprising~~ consisting of rapeseed oil, soybean oil, sunflowerseed oil, palm oil, maize germ oil, cotton seed oil, palm kernel oil and coconut oil.
5. (Currently Amended) ~~Method~~ The method according to ~~one of the claims~~ claim 2 to 4, ~~whereby~~ wherein the unpurified starting mixtures are purified prior to esterification.

6. (Currently Amended) ~~Method~~ The method according to claim 2, ~~whereby~~ wherein the purified oils or fats are refined or semi-refined products of vegetable or animal oils or fats.
7. (Currently Amended) ~~Method~~ The method according to claim 6, ~~whereby~~ wherein the vegetable or animal oils or fats are selected from the group ~~comprising~~ consisting of rapeseed oil, soybean oil, sunflowerseed oil, palm oil, maize germ oil, cotton seed oil, palm kernel oil ~~or~~ and coconut oil.
8. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims~~ claim 1, ~~whereby~~ wherein the esterification device is a column with or without ceramic or metallic packings or packings made of wire fabric.
9. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims~~ claim 1, ~~whereby~~ wherein the C₁- to C₄- mono alcohol used for esterification is methanol or ethanol.
10. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims~~ claim 1, ~~whereby~~ wherein the acid catalyst used for esterification is sulphuric acid or p-toluol sulfonic acid.
11. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims~~ claim 1, ~~whereby~~ wherein the free fatty acids are esterified 2 to 8 times in separate columns consecutive to and connected with each other, depending on the fatty acid content of the starting mixtures.
12. (Currently Amended) ~~Method~~ The method according to claim 11, ~~whereby~~ wherein the ~~obtained~~ esterification mixture obtained from one column is conducted from that column into the consecutive column and whereby, after the addition of a mixture containing a dragging agent, a mono alcohol and an acid catalyst, the esterification mixture is esterified again.

13. (Currently Amended) ~~Method~~ The method according to claim 12, ~~whereby~~ wherein different amounts of acid catalyst are introduced into the separate columns.
14. (Currently Amended) ~~Method~~ The method according to claim 12 ~~or 13,~~ whereby wherein a part of the esterification mixture from one column is conducted to the consecutive column and whereby a part of the resulting esterification mixture is re-conducted into the preceding column.
15. (Currently Amended) ~~Method~~ The method according to ~~one of the claims~~ claim 11 ~~to 14,~~ whereby wherein the esterification mixture is partially purified prior to being conveyed into the consecutive column.
16. (Currently Amended) ~~Method~~ The method according to claim 15, ~~whereby~~ wherein a mixture containing dragging agent, acid catalyst, unconverted mono alcohol and water produced during esterification is separated as the heavy phase via phase separation from the esterification mixtures and is conveyed to devices for the purification and separation of the components of the mixture.
17. (Currently Amended) ~~Method~~ The method according to claim 16, ~~whereby~~ wherein the heavy phase is conducted into a drying device for the separation of mono alcohol and water.
18. (Currently Amended) ~~Method~~ The method according to claim 17, ~~whereby~~ wherein water is separated via molecular sieves or micro filters within the drying device or ~~whereby~~ wherein a mono alcohol and water mixture is evaporated via distillation.
19. (Currently Amended) ~~Method~~ The method according to ~~claims~~ claim 17 ~~or 18,~~ whereby wherein at least one of the mono alcohol ~~and/or~~ and the mono alcohol – water mixture is conducted from the drying device into a rectification device for further purification.

20. (Currently Amended) ~~Method~~ The method according to claim 19, ~~whereby wherein~~ the mono alcohol purified in the rectification device, ~~with having~~ a water content of approximately 1 % to 2 % suitable for use in columns due to a higher fatty acid content, is re-conducted from the rectification device into the esterification device.
21. (Currently Amended) ~~Method~~ The method according to claim 17 or 18, ~~whereby wherein~~ a partial flow of the mixture obtained in the drying device after separation of mono alcohol and water and containing dragging agent and acid catalyst, is re-conducted from the drying device into the esterification device, and ~~whereby wherein~~ a partial flow of the above-mentioned mixture is conducted into an acidification device.
22. (Currently Amended) ~~Method~~ The method according to ~~claim 8 one of the preceding claims,~~ ~~whereby wherein~~ the esterification mixture obtained after esterification in the last esterification column is conducted into an extraction column and is subjected to extraction ~~method~~ in that column ~~while utilizing~~ pure mono alcohol or a mono alcohol –dragging agent mixture for the removal of non-esterified free fatty acid ~~is being utilized~~.
23. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims,~~ ~~whereby claim 8, wherein~~ an esterification mixture is obtained on completion of the last esterification ~~method step~~ in the last esterification column or on completion of the extraction ~~method step~~ in the extraction column and whereby almost all free fatty acids have been esterified and whereby the above-mentioned mixture has an acid number of approximately 1 to 0.5 and a maximum water content of 0.5 %.
24. (Currently Amended) ~~Method~~ The method according to claim 23, ~~whereby wherein~~ the esterification mixture is conducted into a transesterification device connected to the last esterification column or to the extraction column for the basic transesterification of the fatty acid glycerides.

25. (Currently Amended) ~~Method~~ The method according to claim 24, ~~whereby wherein~~ prior to transesterification one or several fatty acid triglyceride starting mixtures with a free fatty acid content of 0 % to 1 % are added to the esterification mixture.
26. (Currently Amended) ~~Method~~ The method according to claim 25, ~~whereby wherein~~ the starting mixture added to the esterification mixture is a refined or semi-refined product of a material selected from the group consisting of rapeseed oil, soybean oil, sunflowerseed oil, palm oil, maize germ oil, cotton seed oil, palm kernel oil and coconut oil ~~or a mixture and mixtures~~ thereof.
27. (Currently Amended) ~~Method~~ The method according to ~~one of the claims claim~~ 24 to 26, ~~whereby wherein~~ the esterification mixture to be transesterified and the starting mixture that was added if required are transesterified 2 to 6 times depending on the composition of the total mixture in separate transesterification devices that are arranged consecutively to each other and are connected with each other.
28. (Currently Amended) ~~Method~~ The method according to claim 27, ~~whereby wherein~~ the transesterification devices are columns with or without ceramic or metallic packings or packings made of wire fabric.
29. (Currently Amended) ~~Method~~ The method according to ~~one of the claims claim~~ 24 to 28, ~~whereby wherein~~ the C₁- to C₄- mono alcohol used for transesterification is methanol or ethanol.
30. (Currently Amended) ~~Method~~ The method according to ~~one of the claims claim~~ 24 to 29, ~~whereby~~ the base catalyst used for transesterification is selected from the group consisting of potassium hydroxide, sodium hydroxide ~~or and~~ sodium methylate.

31. (Currently Amended) ~~Method~~ The method according to ~~one of the claims claim~~ 24 to 30, ~~whereby~~ wherein the transesterification mixture obtained in a column is subjected to preliminary purification.
32. (Currently Amended) ~~Method~~ The method according to claim 31, ~~whereby~~ wherein a mixture of mono alcohol, base catalyst and glycerine is separated as the heavy phase via phase separation from the transesterification mixture and is conducted for further purification and separation of the components to an acidification device and subsequently to a separator arranged consecutively to the acidification device.
33. (Currently Amended) ~~Method~~ The method according to claim 21 ~~or 32,~~ ~~whereby~~ wherein the heavy phase separated from the transesterification mixture is mixed in the acidification device with the partial flow of the dragging agent and acid catalyst mixture that was separated following esterification and conducted into the acidification device, ~~whereby~~ wherein the partial flow is proportioned in such a way that the base catalyst of the heavy phase is neutralised and the heavy phase is sufficiently acidified.
34. (Currently Amended) ~~Method~~ The method according to ~~one of the claims claim~~ 31 to 33, ~~whereby~~ wherein the pre-purified transesterification mixture is conducted into a separator for further purification.
35. (Currently Amended) ~~Method~~ The method according to claim 34, ~~whereby~~ wherein a water-containing mixture comprising mono alcohol, soap, base catalyst and glycerine is separated in the separator from the transesterification mixture with water.
36. (Currently Amended) ~~Method~~ The method according to claim 35, ~~whereby~~ wherein pH-conditioned water or buffered water, ~~especially condensation water or de-ionized water,~~ are is used.

37. (Currently Amended) ~~Method~~ The method according to ~~one of the claims claim~~ 34 to 36, ~~whereby wherein~~ the purified transesterification mixture is conducted from the separator to a consecutive transesterification column for further transesterification.
38. (Currently Amended) ~~Method~~ The method according to ~~one of the claims claim~~ 34 to 36, ~~whereby wherein~~ the purified transesterification mixture of the last transesterification column is conducted out of the separator into at least one additional separator for further purification.
39. (Currently Amended) ~~Method~~ The method according to claim 38, ~~whereby wherein~~ the transesterification mixture from the at least one additional separator is conducted into a drying device where it is dried and purified.
40. (Currently Amended) ~~Method~~ The method according to claim 39, ~~whereby wherein~~ following purification in the drying device a product mixture corresponding to biodiesel and comprising mainly C₁- to C₄- alkyl esters of the free fatty acids and C₁- to C₄- alkyl esters of the higher fatty acids is obtained from the fatty acid triglycerides.
41. (Currently Amended) ~~Method~~ The method according to ~~one of the claims claim~~ 34 to 36 or 38, ~~whereby wherein~~ the water-containing mixture of mono alcohol, soap, base catalyst and glycerine separated from the transesterification mixture in the separator is conducted into the acidification device and then into a consecutive separator.
42. (Currently Amended) ~~Method~~ The method according to claim 32 or 41, ~~whereby wherein~~ the fatty acids formed during transesterification are partially separated from the remaining components of the water-containing mixture in the separator that is consecutive to the acidification device and are re-conducted into the esterification device.

43. (Currently Amended) ~~Method~~ The method according to claim 42, ~~whereby~~ wherein the remaining components of the water-containing mixture are conducted from the separator into the rectification device.
44. (Currently Amended) ~~Method~~ The method according to claim 43, ~~whereby~~ wherein the mono alcohol is separated in the rectification device from the remaining components of the water-containing mixture and is re-conducted to the esterification device in a purified state, ~~whereby~~ wherein the water content of the purified mono alcohol is approximately 1 % to 2 %, ~~preferably 0.1 %~~.
45. (Currently Amended) ~~Method~~ The method according to claim 44, ~~whereby~~ wherein the remaining components of the water-containing mixture are conducted from the rectification device into an evaporation device.
46. (Currently Amended) ~~Method~~ The method according to claim 45, ~~whereby~~ wherein the water is separated in the evaporation device and is re-conducted into the separators.
47. (Currently Amended) ~~Method~~ The method according to claim 46, ~~whereby~~ wherein the mixture comprising glycerine, acid catalyst and base catalyst is conducted into a distillation device for further purification.
48. (Currently Amended) ~~Method~~ The method according to claim 47, ~~whereby~~ wherein the glycerine is separated in the distillation device from the catalysts and is partially re-conducted into the esterification device in a purified state after filtration via a filtration device.
49. (Currently Amended) ~~Method~~ The method according to claim 47, ~~whereby~~ wherein acid and base catalyst are conducted from the distillation device into a thin-layer-evaporation device

where the acid and base catalysts are converted, resulting in the formation of a salt suitable as a fertilizer.

50. (Currently Amended) An apparatus for the production of biodiesel from fatty acid triglyceride starting mixtures containing free fatty acids, said apparatus comprising, in an integrated combination, an esterification unit (3) having at least two esterification apparatuses (9, 171, 173, 175, 177, 11) for the esterification of the free fatty acids, a downstream transesterification unit (5) connected to the esterification unit and having at least two transesterification apparatuses (15, 17) for the transesterification of the fatty acid triglycerides, a downstream purification unit (6) connected to the transesterification unit (5) and intended for the purification of the biodiesel ~~produced~~, and a downstream purification unit (8) connected to the transesterification unit (5) and intended for the purification and separation of ~~the~~ compositions used in at least one of the esterification unit (3) and/or the transesterification unit (5) and for the purification and removal of the water used in the purification unit (6), wherein the purification unit (8) has at least one evaporation apparatus (121) for the recovery of water and is connected by at least one feed line (101) and at least one discharge line (127, 153, 155) to the esterification unit (3), so that ~~the~~ compositions used in the esterification unit (3) and the transesterification unit (5) are simultaneously purified and separated in the purification unit (8) and ~~the~~ compositions used for the esterification are recycled to the esterification unit (3).
51. (Currently Amended) The apparatus as claimed in claim 50, wherein the compositions used in the esterification unit (3) ~~being~~ are a C₁-C₄-monoalcohol, an acidic catalyst and an entraining agent, and the compositions used in the transesterification unit (5) ~~being~~ are a basic catalyst and the C₁-C₄-monoalcohol.
52. (Currently Amended) ~~Device~~ The device according to claim 50 ~~or 51~~, ~~whereby~~ wherein the esterification unit (3) is provided with 2 to 8 consecutive esterification devices (9, 171, 173, 175, 179, 11) that are connected to each other.
53. (Currently Amended) ~~Device~~ The device according to ~~one of the claims~~ claim 50 to 52, ~~whereby~~ wherein the esterification devices (9, 171, 173, 175, 179, 11) are designed as columns.

54. (Currently Amended) ~~Device~~ The device according to claim 53, ~~whereby the~~ wherein a last column (11) is ~~designed as~~ an extraction column.
55. (Currently Amended) ~~Device~~ The device according to ~~one of the claims~~ claim 50 to ~~54~~, ~~whereby~~ wherein the esterification devices (9, 171, 173, 175, 179, 11) are connected via one inlet conduit (41, 185, 187, 189, 191, 201) each for conveying the products formed in one device as ~~the~~ a light phase into the consecutive device.
56. (Currently Amended) ~~Device~~ The device according to claim 55, ~~whereby~~ wherein the feeding pipes (41, 185, 187, 189, 191, 201) are provided with a subsidiary pipe (39) for re-conducting a partial flow of the products formed in the esterification devices (9, 171, 173, 175, 179, 11) into the same or ~~into~~ a preceding esterification device.
57. (Currently Amended) ~~Device~~ The device according to ~~one of the claims~~ claim 50 to ~~56~~, ~~whereby~~ wherein at least one esterification device (9, 171, 173, 175, 179, 11) is connected to a mixing device (35, 199) via a feeding (37, 169) for conducting a mixture of C₁- to C₄- mono alcohol, acid catalyst and dragging agent produced in the mixing device (35, 199) into the esterification device (9, 171, 173, 175, 179, 11).
58. (Currently Amended) ~~Device~~ The device according to claim 57, ~~whereby~~ wherein ~~at least two or more or each~~ of the esterification devices (9, 171, 173, 175, 179, 11) are each connected to one separate mixing device (35, 199) via separate feedings (37, 169) for conducting mixtures with identical or different concentrations of C₁- to C₄- mono alcohol, acid catalyst and dragging agent into the esterification devices (9, 171, 173, 175, 179, 11).
59. (Currently Amended) ~~Device~~ The device according to ~~one of the claims~~ claim 50 to ~~58~~, ~~whereby~~ wherein the esterification devices (171, 173, 175, 179, 11) are connected via one feeding (181, 183, 193, 195) each for conveying at least a partial flow of the heavy phase, obtained via phase separation after esterification in an esterification device and containing unconverted glycerine, unconverted mono alcohol and unconverted acid catalyst, into the preceding esterification device (9, 171, 173, 175, 179).

60. (Currently Amended) ~~Device~~ The device according to claim 59, ~~whereby~~ wherein the feeding (181, 183, 193, 195) passes through a drying device (197) in order to remove at least one of water ~~and/or~~ and mono alcohol from the heavy phase.
61. (Currently Amended) ~~Device~~ The device according to claim 60, ~~whereby~~ wherein the drying device (197) ~~is designed~~ serves as a distillation device for the evaporation of a water - mono alcohol mixture, or as a molecular sieve or micro filter ~~in order~~ to remove water as a permeate.
62. (Currently Amended) ~~Device~~ The device according to ~~one of the claims~~ claim 59 to ~~61~~, ~~whereby~~ wherein the feeding (181, 183, 193, 195) is provided with a subsidiary pipe (203, 205) for conveying a partial flow of the heavy phase into the same esterification device (171, 173, 175, 179, 11).
63. (Currently Amended) ~~Device~~ The device according to ~~one of the claims~~ claim 50 to ~~62~~, ~~whereby~~ wherein the esterification devices (9, 171, 173, 175, 179, 11) are connected with the transesterification unit (5) via at least one feeding (47) for conveying the products formed in the esterification devices (9, 11) into the transesterification device (5).
64. (Currently Amended) ~~Device~~ The device according to ~~one of the claims~~ claim 50 to ~~63~~, ~~whereby~~ wherein the transesterification unit (5) is equipped with 2 to 4 transesterification devices (15, 17) arranged consecutively and connected with each other.
65. (Currently Amended) ~~Device~~ The device according to claim 64, ~~whereby~~ wherein the transesterification devices (15, 17) are designed as columns.
66. (Currently Amended) ~~Device~~ The device according to claim 64 ~~or 65~~, ~~whereby~~ wherein the transesterification devices (15, 17) are connected with the purification unit (6) via at least one feeding (105, 106) for conveying the products formed in the transesterification devices (15, 17) into the purification unit (6).
67. (Currently Amended) ~~Device~~ The device according to ~~one of the claims~~ claim 50 to ~~66~~, ~~whereby~~ wherein the purification unit (6) is equipped with at least 4 separators (71, 73, 75, 77), arranged consecutively to and connected with each other, and a drying device (159) for the purification of the obtained product.

68. (Currently Amended) ~~Device~~ The device according to claim 67, ~~whereby~~ wherein the separators (71, 73, 75, 77) are connected with the drying device (159) via a feeding (57) for conducting the products that were separated from the base catalyst, mono alcohol, acid catalyst and dragging agent in the separators (71, 73, 75, 77) into the drying device (159).
69. (Currently Amended) ~~Device~~ The device according to claim 67 ~~or 68~~, ~~whereby~~ wherein the drying device (159) is equipped with an outlet conduit (163) for the end products purified in the drying device (159).
70. (Currently Amended) ~~Device~~ The device according to claim 67 ~~or 68~~, ~~whereby~~ wherein the separators (71, 73, 75, 77) are connected with the purification unit (8) via the feedings (107, 109) for conducting the mixture of base catalyst, mono alcohol, acid catalyst and dragging agent separated in the separators (71, 73, 75, 77) into the purification unit (8).
71. (Currently Amended) The apparatus as claimed in ~~any of claims 50 to 70~~ claim 50, ~~wherein~~ the purification unit (8) ~~having comprises~~ at least one drying apparatus (97), one acidification apparatus (103), one separator (113), one rectification apparatus (117), one distillation apparatus (131), one thin-film evaporation apparatus (139) and one filtration apparatus (147).
72. (Currently Amended) ~~Device~~ The device according to ~~one of the claims~~ claim 50 to 71, ~~whereby~~ wherein the esterification devices (9, 11) are connected with the drying device (97) via at least one feeding (95) for conducting a mixture comprising unconverted C₁- to C₄- mono alcohol, acid catalyst and dragging agent, obtained in the esterification devices via phase separation, into the drying device (97).
73. (Currently Amended) ~~Device~~ The device according to claim 72, ~~whereby~~ wherein the drying device (97) is connected with the rectification device (117) via a feeding (125) for conveying the C₁- to C₄- mono alcohol separated in the drying device into the rectification device (117).
74. (Currently Amended) ~~Device~~ The device according to claim 72 ~~or 73~~, ~~whereby~~ wherein the drying device (97) is connected with the acidification device (103) via a feeding (101) for conducting the mixture of acid catalyst, conveying agent and traces of C₁- to C₄- mono alcohol, separated in the drying device (97), into the acidification device (103).

75. (Currently Amended) ~~Device~~ The device according to claim 71 ~~or 74~~, ~~whereby~~ wherein the acidification device (103) is connected with the separators (71, 73, 75, 77) via the feedings (107, 109).
76. (Currently Amended) ~~Device~~ The device according to claim 74 ~~or 75~~, ~~whereby~~ wherein the acidification device (103) is connected with the separator (113) via a feeding (111) for conveying the mixture that was acidified in the acidification device (103) into the separator (113).
77. (Currently Amended) ~~Device~~ The device according to claim 76, ~~whereby~~ wherein the separator (113) is connected with the esterification unit (3) via a feeding (155) for re-conducting the fatty acid separated in the separator (113) into the esterification unit (3).
78. (Currently Amended) ~~Device~~ The device according to claim 76 ~~or 77~~, ~~whereby~~ wherein the separator (113) is connected with the rectification device (117) via a feeding (115) for conveying the water-containing mixture of acid catalyst, base catalyst and traces of the mono alcohol formed in the separator (113) into the rectification device (117).
79. (Currently Amended) ~~Device~~ The device according to claim 78, ~~whereby~~ wherein the rectification device (117) is connected with the esterification unit (3) via a feeding (127) for re-conducting the mono alcohol purified in the rectification device (117) into the esterification unit (3).
80. (Currently Amended) ~~Device~~ The device according to claim 78 ~~or 79~~, ~~whereby~~ wherein the rectification device (117) is connected via a feeding (119) with the evaporation device (121).
81. (Currently Amended) ~~Device~~ The device according to claim 80, ~~whereby~~ wherein the evaporation device (121) is equipped with a feeding (123) serving to convey the water purified in the evaporation device (121).
82. (Currently Amended) ~~Device~~ The device according to claim 80 or 81, ~~whereby~~ wherein the evaporation device (121) is connected with the drying device (131) and the distillation device (135) via feedings (129, 133) for conveying the mixture of glycerin, acid catalyst and

base catalyst, separated in the evaporation device (121), into the device (135).

83. (Currently Amended) ~~Device~~ The device according to claim 82, ~~whereby~~ wherein the distillation device (135) is connected with the thin ~~thion~~-layer-evaporation device (139) via afeeding (137) for conveying the acid and base catalysts separated in the device (135) into the evaporation device (139).
84. (Currently Amended) ~~Device~~ The device according to claim 83, ~~whereby~~ wherein the thin-layer-evaporation device (139) is equipped with a pipe (141) serving as a discharge for the conversion product of the base and acid catalyst that is suitable for use as a fertilizer.
85. (Currently Amended) ~~Device~~ The device according to claim 83, ~~whereby~~ wherein the distillation device (135) is connected with the filtration device (147) via a feeding (145) for conveying the glycerin into the filtration device (147).
86. (Currently Amended) ~~Device~~ The device according to claim 85, ~~whereby~~ wherein the filtration device (147) is connected with the esterification unit (3) via a feeding (149) in order to re-cycle a partial flow of the glycerine purified in the filtration device so that it can be reused as dragging agent.

Please also add the following new claims:

87. (New) The method according to claim 1, wherein the alkyl esters of higher fatty acids comprise biodiesel.
88. (New) The method according to claim 36, wherein the pH-conditioned water or buffered water is condensation water or de-ionized water.
89. (New) The method according to claim 44, wherein the water content of the purified mono alcohol is 0.1%.